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FOUNDED BY WILLIAM HUNTING, F.R.C.V.S.

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THE NATIONAL V.M.A.

The report of the Annual General Meeting for 1917, with the agenda of its forthcoming Annual Meeting at Red Lion Square on Thursday next, are now in the hands of its members. Both show that "The National," despite the difficulty of the times, is continuing to work steadily and well in the interests of the profession.

The report for 1917 reveals a fair financial position, which is all that can be expected just now. It also contains a long discussion of the remuneration and conditions of service of Veterinary Inspectors in Ireland; and doubtless the assistance of "The National," which was willingly given, had some share in obtaining such improvements in these as have since been gained. The agenda for the meeting next week foreshadows the inception of a movement of much wider importance, which "The National," from its constitution, is well fitted to set on foot.

Mr. Peter Wilson is to open a discussion upon "Professional Fees;" and his opening address is circulated with the agenda. Essentially it consists of a proposal for an organised attempt to improve the present fees; and Mr. Wilson, recognising the magnitude of the subject, has wisely treated it briefly and in broad outline. His address should prove the first note of a much wider discussion than is possible at any one meeting.

Members will agree that the increased cost of living and of conducting veterinary practices are only two among many reasons for an endeavour to improve veterinary fees; but no thinking man will deny that the task is likely to prove very difficult.

Mr. Wilson mentions three classes of fees—those obtained from insurance companies, from local authorities, and from general practice. The first of these may be improved, but are not likely ever to be wholly satisfactory to the profession. Insurance is a purely commercial transaction; and such reasons as the keen competition between rival companies, the difficulty or impossibility of raising veterinary fees without also raising premiums, and the fact that no insurance company is really obliged to employ veterinary surgeons at all, seem insuperable obstacles to any very great improvement in our fees. Recognising that, we may still hope to effect some improvement.

Fees from local authorities are a more hopeful matter. Here the general recognition of the altered conditions which render increased remuneration almost universally necessary will be a powerful aid to us, as it has proved to public servants in other professions. Another factor, of more permanent value to us, is the great increase of official appreciation of veterinary work that has marked recent years. If veterinary claims upon local authorities are urged wisely, there should be no insuperable difficulty in getting them fairly readjusted.

Fees from private practice are a very different question. This is the most important portion of the whole subject, because it affects the largest number of members; but its effective handling will be very difficult. Mr. Wilson makes two excellent suggestions: that "The National," after collecting the opinions of members through its branches, should attempt to devise a general scheme of charges acceptable to the whole profession, and that the Council of the R.C.V.S. should be asked to assist. But Mr. Wilson shows sound appreciation of the complexities of the problem when he adds that "the greatest difficulty might be found in formulating such a scheme." It is obvious that to fix a minimum fee below which no one would be allowed to charge, which has been suggested before, might not help matters much. Any such fee would have to be very low, or veterinary services would be rendered inaccessible to many owners; and this would still leave room for undercutting. Further, it must be remembered that a minimum fee, to be enforced, would need the approval of a substantial majority of the profession; and this is another reason for obtaining the fullest possible consensus of professional opinion.

Mr. Wilson advances two other suggestions, both good ones. One is to fix a definite fee for advice, apart from mileage, operations or medicine; the other is to charge increased fees when summoned after a certain hour. There are members who already adopt these measures, especially the first one, while others do not. This illustrates the lack of uniformity in the method of estimating fees which has always prevailed in the profession. Each practitioner fixes fees in his own fashion; and though there has been much desultory conversation on the subject, there never has been any serious and organised attempt to obtain the verdict of the profession upon what fees should be, or upon what basis they should be assessed.

A little consideration of such points as the enormous diversity in veterinary work, the varying degree of its economic value to clients, and the difference in the customs and conditions of districts, will show how complex is this problem of fees. Any attempt to improve them will be fraught by many difficulties, to ignore which would be to court failure. The first step necessary is a careful collation of expressed opinion throughout the Kingdom. "The National," with its numerous branches, seems the most suitable body to commence this, and Mr. Wilson's address is calculated to induce this movement. Such an examination, which cannot be too

careful, is an essential preparatory step to the formulation of any workable scheme.

The Muktesar Laboratories.

We reprint this week the major part of the very interesting report of the Imperial Bacteriologist for the year ending March, 1917, rather more than half of which term the laboratories were in charge of the Assistant Bacteriologist, Mr. A. W. Shilston, and the latter portion under the recently appointed chief, Mr. A. Leslie Sheather. In some respects this may be considered the most important itstitution of its kind in the world, since it caters for a population of over 315 millions, over 78 per cent. of which is under British rule, and of which by far the most important occupation is agriculture—over 261,000,000 acres were cropped in 1914-15, mainly by peasant proprietors. Add to this that India has 220 vernacular languages "of extraordinary variety," and that three oriental religious creeds include 93 per cent. of the population, and a vague idea may be formed of the "passive resistance" that is offered to the practice of Western medicine amongst their animals. And it is in the steady success in this direction that the triumph of the work of the laboratory lies. Obviously the immediate result is obtained by the work of the men in the field, and most of the reports which we have reproduced in part from time to time contain a remark on the increased confidence of the ryots in their veterinary advisers.

It is in such conditions that one is able to feel that just pride in our profession which our 74 years of corporate life has not yet given us in this country—thanks to the ignorant and mischievous neglect of agriculture as a section of the utmost importance in national life.

The work of the laboratory is shown by our abstract of the report, from which much detail is omitted. Much of its past success was due to the able work of the late chief, Maj. J. D. Holmes, C.I.E.; but this first instalment of the work of the new chief makes it evident that the outlook for the future is assured, the more so that he is so ably seconded by a capable and enthusiastic "Assistant."

ON REMOVAL OF THE EYEBALL—

WITH UNION OF THE EYELIDS.

Apropos the recent communications on the subject, a description of the method adopted in Mesopotamia, the land of dust and flies, may prove of interest.

Both general and local anæsthesia are adopted. The eyelashes are clipped off and edges of the eyelids are firmly stitched together by a continuous suture. An incision is carried the whole length of the eyelids and right through to the mucous membrane, which is then separated from the remainder of the eyelid. This is repeated on the other lid, the incisions meeting and embracing both the outer and inner canthi. All the attachments are then divided, the membrana nictitans, the lachrymal sac and the sutured edges of the eyelids with the detached mucous membrane are removed in one piece.

Ligature of the optic nerve with its contained artery is not now practised, as in some instances the ligature appeared to act as a foreign body. If division is made with a pair of blunt scissors the hæmorrhage is negligible and easily controlled by gauze packing. Before packing, the edges of the lids are brought together, turned outward and sutured deeply. Four stitches are sufficient but they should be slack enough to allow of the passage of at least half a lead pencil. Packing is done by inserting a long strip of gauze through the inner canthus; this is allowed to remain for 24 hours, then it is gently pulled out and the orbit is syringed out with a solution of Hydrogen peroxide.

Beyond the ordinary wound dressing, nothing more requires to be done. The post-operative swelling is sufficient to render the eyelids immobile till union takes place, providing the sutures do not cut out owing to being too tight in the first instance. These may be removed in ten days, and recovery is usually complete in about a fortnight.

On ligature of the external Digital Vein.

In an abstract in *The Veterinary Record*, in 1916, this operation was reported as being of great service in chronic laminitis. This has also been my experience, as many animals hardly able to move a fortnight after the onset of the disease have been returned to duty a month later. I now operate in three or four days from the beginning with good results.

It was but a step to adopt the same method of obtaining Bier's hyperæmia in cases of intractable wounds of pastern and coronet, and the results have been excellent; so far I have not had an opportunity of testing the treatment in suppurating feet other than quittor.

A few casses may be mentioned:—

Wound just below the fetlock; defied all treatment for weeks; dried up almost at once and gave no more trouble.

Punctured wound in the postero-lateral side of the pastern extending downward and forward 1½ in. inside the lateral *cartilage*. Patient too lame to walk. Discharge ceased in less than 24 hours, and animal returned to duty a fortnight later.

Quittor had been under treatment for over three months, ligatured vein only. Inflammatory condition and discharge abated considerably after the first few days. Found slight discharge still continuing a fortnight later, so made a dependent orifice under the coronary band and curetted out some necrosed cartilage. Drainage was ensured by light packing with tow. Recovery complete (three months ago) and no recurrence.

The action of Bier's hyperæmia is said to be "Bactericidal, resorbent and anodyne," and certainly in all my experience I should never have looked for a successful issue to the slight operation performed in this case—merely drainage and "blind" curetting. Whether the bacillus of necrosis has been present in all my cases I cannot say, but a necrosis bacillus of some variety or strain had been at work on the lateral cartilage, and I assume his destruction had been effected by the increased leucocytosis. In this case the diseased condition appeared to have become localised as the result of the hyperæmia induced, but whether it is better to ligature the vein and operate simultaneously or with an interval between I cannot yet say. This may depend on the duration of the diseased condition prior to treatment.

Capt. T. W. Lloyd, A.V.C., Army Remount Department, reports that he operated on four cases. *One* canker foot—no result; *One* quittor (?)—animal unable to walk but sound in a week, discharge ceased at once; *Two* wounds—results excellent. So successful has he been that, like myself, he is now adopting the treatment in all cases of a like nature.

The operation is simple and may be briefly described as follows:—The site chosen is on the side of the fetlock joint—either side according to requirement; the hair is shaved off and a tourniquet applied on the meta-

carpus or metatarsus as the case may be. The venous flow having been stopped the vein stands out prominently. The incision is made right over it and the connected tissue is divided until a hook can be inserted under the vessel, taking care not to include the nerve (I always use a fine blunt button-hook) and ligature. The operative wound is very small and need not be sutured. Gauze and a bandage conclude the operation. Healing may take place by first intention, though sometimes the ligature sloughs out. No bad effects from the operation have ever been noted by the writer.

Operating Table.

It is hoped at an early date to publish photographs and a description of an operating table which had its origin in Mesopotamia. An improved pattern has been erected at Meerut, and so successful is it that it has been adopted by the Government for all Indian Station Veterinary Hospitals where required.

Its merits are:—Simple, efficient, and cheap—thus within the reach of every veterinary surgeons.

W. W. Lang, Capt. A.V.C.

ABSTRACTS FROM FOREIGN JOURNALS.

The toxicity of Cotton-seed Meal.

Poisoning by cotton-seed meal is common in North America; and for that reason W. A. Withers and A. Carruth carried out some investigations upon it in Carolina.

Their first experimental studies led them to the deduction that the toxic principle of cotton-seed meal is Pyro-phosphoric acid. A second series of experiments then led them to the hypothesis that the toxic principle is constituted by a protein compound containing Sulphur in an unstable combination, which exercises a toxic effect upon the blood. Finally, experiments made with *gossypol*, a substance isolated from cotton-seed meal by Marchiwsky, convinced them that this is the true toxin.

The authors conclude from their researches that the proper method for eliminating the toxicity of cotton-seed meal should consist in the complete extraction of the gossypol or its transformation into an inert substance by oxidation or by precipitation.

Subcutaneous and Ophthalmic Mallein Tests.

Baumann, in the *Archiv Veterinarnik Naouk* for 1912, published an account of some extensive comparative observations upon these two tests. The report comprises the results of more than a thousand malleinisations practised by the author and by other veterinarians. One hundred and forty horses were found to be infected from the thousand tests. In some cases the subcutaneous and ophthalmic tests were carried out simultaneously, while in others they succeeded one another. The following are the author's chief conclusions;—

1. All horses having clinical lesions of glanders give the typical reaction to mallein introduced under the skin or into the eye.

2. In horses attacked by glanders, but without clinical lesions, or convalescent, the results of malleinisation by these two procedures are not always identical.

3. The majority of horses which give a typical ophthalmo-reaction also give, if subcutaneous malleinisation is practised one or two months later, a new reaction of the previously tested eye.

4. The ophthalmo-reaction is sometimes followed by a general thermic reaction.

5. Subcutaneous malleinisation gives more constant results than does the ophthalmic test.—(*Revista de Higiene y Sanidad Veterinaria*).

Annual Report of the Imperial Bacteriologist, Muktesar Laboratories, for the year ending 31st March, 1917. (A. Leslie Sheather, B.Sc., M.R.C.V.S.). [Abridged.]

Administration.

Mr. A. W. Shilston, M.R.C.V.S., held charge of the current duties of the Imperial Bacteriologist up to the 10th October, 1916, in addition to his own as Assistant Bacteriologist. I relieved him, and held the post till the end of the year under report.

Dr. G. H. K. Macalister, M.A., M.D., D.P.H., held the post of Pathologist up to the 12th November, 1916, after which his services were placed at the disposal of the Army Department for employment in the Central Laboratory at Basra.

The post of Physiological Chemist remained vacant throughout the year owing to the services of Dr. R. V. Norris, M.Sc., A.I.C., D.Sc., having been temporarily transferred to the Military Department in October, 1915.

Mr. S. E. Andrews held the post of engineer throughout the year.

Mr. A. J. Hearsey was appointed Farm Manager on probation for one year with effect from 14th July, 1916.

Mr. V. R. Phadke, a graduate from the Bombay Veterinary College, who underwent a course of training in Bacteriology and Pathology in England, was appointed to the new post of Veterinary Deputy Superintendent for the inoculation of cattle in the Military Dairies.

Fodder supply. During the past year the arrangements made for obtaining hay supply were very satisfactory. Three local contractors were engaged in place of one, and a much larger quantity of hay than usual was collected.

The yield of fodder from the Laboratory area was also in excess of that obtained in previous years, and efforts are being made to increase it.

The arrangements for grain supply were satisfactory, but on account of the difficulty experienced in obtaining transport we were compelled to increase slightly the rates for carriage from Haldwani to Muktesar.

Forests. The Deputy Conservator of Forests, Naini Tal Division, has practically completed the working plan for the forest areas, and it is expected that in future nearly 30,000 maunds of fuel will be available annually from the forests instead of only 10,000 maunds as prescribed under the old working plan.

Water supply. The question of water supply is becoming more and more difficult every year.

Owing to heavy falls of snow during February and March, 1917, the supply of water was maintained without much difficulty during the portion of the year ending in March: but in the beginning of the year under report, to overcome the scarcity of water arrangements had to be made to augment the supply by the erection of three "Collecting Diggis" in the vicinity of springs. Considerable manual labour is required for the utilization of this water. To economise, a small portable pump has been ordered and will be used shortly to raise the

water from the *diggis* to the well, from which it will be raised to the distribution tanks by means of our electrically driven pump.

The Public Works Department recently notified that proposed electrical pumping scheme referred to in the last year's report is being delayed on account of the difficulty experienced in getting pumps and pipe lines in this country.

Electric centrifuges. The three new centrifuges referred to in last year's report have been erected and are giving satisfaction. The question of obtaining six more centrifuges of the same pattern in the place of nine as originally proposed, has been approved by Government.

The three old centrifuges which remained in workable condition at the close of last year have since all become unsafe to run.

Bareilly Branch Laboratory. The Imperial Bacteriologist was unable to go to Bareilly in consequence of his arrival in Muktesar only in October, 1916. The Branch Laboratory was, however, kept open throughout the winter for the maintenance of a supply of rinderpest virus for the inoculations at Government Military Dairies.

Tours. Mr. Shilston visited Bareilly early in April and October, 1916, to see the Agricultural Adviser to the Government of India regarding the construction of the new Branch Laboratory at Izatnagar and to consult with him on some other important subject.

Mr. Shilston visited Mona Remount Depot on the 23rd October, 1916, at the request of the Director General of Remounts, to investigate a peculiar disease amongst horses. On the return journey he saw the Chief Supt. C.V.D. at Amritzar regarding dourine, and halted one day at Bareilly to see the experiments there, returning to Muktesar on the 29th October. He again proceeded to Bareilly on the 4th November, 1916, to initiate inoculations against rinderpest by the simultaneous method in the military dairy farms, and visited Sitapur Military Dairy Farm. Between the 9th and 15th November he toured in company with the Chief Supt. C.V.D., Punjab, to demonstrate the method of collecting material for the diagnosis of dourine.

After this Mr Shilston visited the Military Dairies at Sitapur and Cawnpore for the purpose of inoculating cattle, and at the end of November he saw the Agricultural Adviser to the Government of India at Delhi.

During the 1st and 2nd weeks of December Mr. Shilston visited Allahabad and Agra Dairy Farms to inoculate dairy cattle there, returning to Muktesar on the 12th December. On the 5th January he again went down to Bareilly and from there visited Karnal to inoculate dairy cattle. From the 19th January onward he toured in the Madras Presidency with the Supt. C.V.D., Madras, at the request of the Madras Government, to enquire into the question of suppression of rinderpest in that province. Between the 3rd and 7th February he inoculated cattle at the Military Dairy, Bangalore, and subsequently visited Belgaum and Bombay.

Dr. Macalister carried out investigations in connection with *Kumri* in Assam, and toured there with the Supt. C.V.D.

Preparation of Serums and Vaccines.

Rinderpest serum. During the year 1916-17, 1,243,670 doses of anti-rinderpest serum were prepared and 1,409,220 doses were issued as against 1,186,550 doses prepared and 964,460 doses issued during the year 1915-16. The increase in the demand was due to the prevalence of this disease in nearly all provinces.

The total amount of the bills for sale of anti-rinderpest serum issued during the year under report comes to Rs. 1,60,021 as against Rs. 1,09,566, realised during the previous year. [This amount includes Rs. 17,186 realised for the year 1915-16. Bills amounting to Rs. 16,228 are still awaiting payment and have to be carried over to next year's account.]

If the cost of 154,750 doses supplied free to the Military Department were added, the total revenue from this source would amount to Rs. 1,79,364.

A table compiled from the returns received from 14 Provinces and States shows the results of anti-rinderpest serum injections carried out in the field during the year 1916-17. The following are the totals given. The table contains detail of distribution to the Provinces.

Outbreaks in which inoculation was undertaken			3,645
Died uninoculated during disease		Bovines	57,878
		Others	87
Inoculated	...	Bovines	522,273
		Others	810
Died after inoculation	...	Bovines	2,611
		Others	10
Percentage of deaths in inoculated bovines			0·49

The figures given in the table of the animals inoculated with serum include animals which were infected at the time of inoculation and which serum cannot be expected to save; those which became infected after protective action of the serum had passed off; as well as the more susceptible animals which the serum failed to protect. As the mortality was only 0·49 per cent. of the whole number, we are justified in concluding that this serum is of the utmost practical value.

The Supt. C.V.D., Assam, in referring to the number of deaths after inoculation in Assam in the return for the quarter ending 30th Sept., 1916, which amounted to 116 out of 4,931 animals inoculated, states that:—

"102 deaths occurred on one tea garden. An Inspector visited the garden 20 days after inoculation and found that 405 animals had been inoculated, that 201 of these were attacked and 85 died. Of these 85, about 43 contracted the disease within 9 days of inoculation. The animals were inoculated on the 8th to 10th July, 1916. Many of the coolies objected to inoculation and a large number (675) were not inoculated. Rinderpest persisted in the garden, and on the 8th to 12th August, 483 animals were inoculated or reinoculated, out of which 131 were attacked and 17 died. The dose of serum was 25 c.c. (a few large animals got 30 c.c.). A certain number (43) of cattle died, as they were evidently inoculated in the incubative stage of the disease. The disease was of a very virulent type and I think the dose was not quite sufficient. The disease subsided after the second inoculation. The explanation of the figures in column 6 of the chart, *viz.*, number not inoculated, is that the animals were either suffering from the disease or hidden in the jungle by the coolies."

Similarly the Supt. C.V.D., Bengal, states that:—

"Due to rains these villages were almost under water for the season. The animals were constantly shut in their respective sheds for the time being. The heavy mortality took place in three herds of over 50 cattle in each, kept thickly in small sheds, and left open to inclement weather in absence of proper nursing and feeding. It is not improbable, therefore, that they gradually lost condition and most of them died of starvation. Percentage of deaths was high at Hariharpur village, where the owner kept his herd far away from his home having no sensible men to look after it."

As regards the efficacy of this serum, the Supt. C.V.D., United Provinces, in his Annual Report, paragraph 22, page 3, for the year ending 31st March, 1916, states:—

"During the year under report there has been considerable abatement in the ravages of this disease and very few districts were seriously affected. Wherever it appeared, inoculation campaigns were originated with the gratifying result that only 3767 deaths have been recorded against 19,839 of last year, those districts which suffered most severely being Banda, Benares, Gorakhpur, Basti, and Mirzapur."

The number of doses manufactured during the year was 1,243,670, 57,120 more than preceding year: and the number issued was 1,409,220—27,170 doses in excess of any previous issue.

Anthrax serum. 11,029* doses of this serum were prepared (decrease 60,841), and 29,069 issued (decrease 19,268 on the previous year). The manufacture of this serum was regulated according to the demand: a balance of 23,533 doses of the last year's manufacture was included.

Hæmorrhagic septicæmia serum and vaccine. 122,915 doses of hæmorrhagic septicæmia serum were manufactured and 157,065 doses issued during the year under report, as against 127,365 doses prepared and 79,965 issued in the year 1915-16.

The number of doses of hæmorrhagic septicæmia vaccine prepared and issued during the year 1916-17 was 146,540 as against 124,150 prepared and issued in the preceding year.

The demand for both serum and vaccine is increasing and steps are now being taken to augment the supply of these products.

As regards the efficacy of the serum, the Supt. C.V.D., Bombay Presidency, in his Annual Report for the year 1915-16, states:—

"Serum inoculation in 14 outbreaks of hæmorrhagic septicæmia was adopted with very satisfactory results, only one death occurring in an inoculated animal, while 141 uninoculated died of this disease. The supply of this serum was limited or more inoculations would have been carried out."

The Supt. C.V.D., United Provinces, in the Annual Report for 1915-16, states:—

"Two hundred and fifty-four cattle were immunised by the vaccine method and 3844 were inoculated, and both with generally satisfactory results."

Hæmorrhagic septicæmia *serum* is used to check actual outbreaks of the disease.

The number of doses manufactured during the year was 122,915—4450 decrease on previous year; and the number issued was 157,065—77,100 doses in excess of any previous issue.

The results obtained from inoculations with hæmorrhagic septicæmia *vaccine* are detailed in a table which gives the totals as:—Number of outbreaks in which inoculation was undertaken, 265; number of animals which died uninoculated in course of disease, 170; number inoculated, bovines, 56,990; died after inoculation, 15; percentage of deaths in inoculated bovines, 0·02.

Hæmorrhagic septiæmia vaccine is used in areas where the disease is endemic at the beginning of the seasons when it is most prevalent.

The number of doses manufactured during the year was 146,540—22,390 more than preceding year; and the number issued was 146,540—22,390 in excess of the previous year's issue.

Black Quarter vaccine. 23,350 doses were issued from the outstanding balance of last year, as against 20,257 doses during the preceding year.

The Supt. C.V.D., United Provinces, in his Annual Report for 1915-16, states:—

"There has been a satisfactory decline in the prevalence of this disease. It appeared in 15 district and 262 deaths only have been reported. In those cases where the disease appears to recur periodically, vaccination was resorted to as a preventive measure and 183 animals were treated by this method. Protective vaccination is probably responsible to some extent for the steady decrease in the death rate."

The Chief Supt. C.V.D., Punjab, in his Annual Report for 1915-16, states:—

"One thousand four hundred and fifteen deaths were reported during the year against 2007 during the previous year. Again, the deaths during the year were considerably less, which fact the Supt., South Punjab, partly attributes to a healthier year, and partly to a larger number of vaccinations. 2715 vaccinations were performed against 981 last year. The larger number of vaccinations is creditable, and shows that the people appreciate the help of the department. This statement also applies to Hæmorrhagic septicæmia vaccinations and Rinderpest inoculations."

Strangles serum and vaccine. 4195 doses of this serum were prepared and 9063 issued, as against 11,242 doses manufactured and 17,132 issued in 1915-16.

Besides this, 260 doses of antistreptococcic and 500 doses of mixed antistreptococcic and staphylococcic vaccines were prepared and issued.

The demand for the above serum and vaccines was mainly from the Army Remount Depots for the treatment and experimental immunisation of horses against strangles.

Mallein. The demand for mallein was maintained fully throughout the year. 35,972 doses were issued as against 30,332 doses in the preceding year.

The number of doses manufactured during the year was 30,000—1991 more than preceding year; and the number issued was 35,972—4868 in excess of any previous issue.

Tuberculin. Eighty-two doses were prepared during the year under report. The whole number of doses issued was 377 as against 430 in 1915-16.

A new brew consisting of a large number of doses is now ready for issue.

Miscellaneous vaccines. As in the previous year material from various infective conditions, chiefly from horses, was received at this Laboratory for the preparation of autogenous vaccines.

In all 690 doses of special vaccine and 50 of pleurisy vaccine were prepared and issued.

Specimens examined. During the year under report 230 specimens were received for examination and report at this Laboratory as against 125 specimens during the preceding year.

Serum test for the diagnosis of Dourine. The study of the complement fixation test and its application to the diagnosis of dourine in India, was taken up by Mr. Shilston early in the year. The discovery that this disease was widely established in the Punjab and Baluchistan, and is threatening seriously to interfere with horse-breeding operations, made the working of a reliable diagnostic method a matter of great importance.

The progress of this investigation was much interfered with by pressure of routine work and the necessity of making various tours, but a considerable number of tests were carried out before the close of the year.

Reports were furnished on 131 specimens of serum, received from the Civil and Army Remount Veterinary Officers as follows:—

Positive 10; Negative 64; Doubtful 10.

Forty-seven samples were received in such condition as to be unsuitable for testing.

Training. Mr. G. H. Frost, Supt. Military Dairy Farms, underwent a course of training at Muktesar from 29th July to 13th Oct., 1916, in the study of contagious diseases among animals.

At the request of the Director of Agriculture and Industries, Punjab, Mr. Barkatali, Bacteriological Assistant to the Agricultural Chemist of that Province, visited the Laboratory to make himself acquainted with the modern researches carried out at the institution. He stayed here for a week only in October, 1916.

Military Dairy inoculations. Mr. V. R. Phadke, Vety. Deputy Supt., visited Jubbulpore in August to investigate the cause of deaths amongst the cattle at the Military Dairy Farm there, and inoculated 1800 animals

* These quantities vary on account of balance in hand, and of varying requirements.

collected at Lucknow and Cawnpore for transport duty in Mesopotamia.

In October Mr. Phadke was deputed to Bareilly to continue and supervise experiments initiated by the Assistant Bacteriologist.

During November, 1916, the Assistant Bacteriologist and Mr. Phadke carried on inoculations by the simultaneous method in the Government Military Dairies at Sitapur and Cawnpore.

During December and January the animals at Allahabad, Agra, and Karnal dairies, were inoculated, and frequent visits were paid by the Deputy Supt. to all these five dairies to supervise the reactions of inoculated cattle.

In February, 1917, the Assistant Bacteriologist initiated inoculations in the dairy cattle in South India, and Mr. Phadke carried them on in the dairies at Bangalore, Wellington, and Belgaum.

During winter, 446 animals were treated by the serum simultaneous method at the Military Dairy Farms in India. The majority of these animals treated by this method showed moderate reactions, and it is anticipated that an active and lasting immunity against rinderpest has been established.

There were no mortalities amongst these animals from rinderpest as a result of serum simultaneous inoculation, but some eight animals (seven half-bred and one country bred) while reacting to the simultaneous inoculation developed piroplasmosis, diagnosis being confirmed by the detection of piroplasmata in blood by microscopic examination. Of these, six were successfully treated by the simultaneous administration of Trypan blue, but in the case of two half-breds death was so sudden that treatment could not be carried out.

Besides these inoculations, natural outbreaks of rinderpest at Belgaum and Mhow were attended to and suppressed by inoculating the animals on the farm (some 1300) with serum alone.

At Bangalore a natural outbreak occurred amongst untreated milking stock; this was suppressed by means of serum inoculations. None of the animals previously treated by the simultaneous method became infected during this outbreak.

Research Work.

Several factors have combined to limit the amount of research work that could be carried out during the past year. The routine work of the Laboratory and difficulties of administration were greatly increased. The departure of Dr. Macalister, shortly after my arrival, again reduced the number of officers on the staff to two. During the first half of the year Mr. Shilston's time was very fully occupied with duties of administration and the maintenance of the increasing output of sera and vaccines. Later he was touring in the Madras Presidency, supervising inoculations at the Military Dairies and initiating tests for the diagnosis of dourine, outbreaks of which disease have assumed serious proportions in the Punjab and Baluchistan.

In these circumstances the amount of time that I was able to devote to research work was very small.

Rinderpest. A large number of observations have been made regarding the vitality of the virus of rinderpest under various artificial conditions. A report of the results obtained will be submitted for publication shortly.

The method of obtaining serum by the oxalate process is being practised on a larger scale in order to cope with the enormous increase in the demands, and will shortly be applied to the whole of the serum production in Muktesar.

In the course of the inoculations carried out at the Military Dairies several valuable observations were made regarding methods of immunisation.

Kumri. A report on Kumri was submitted for publication by Dr. Macalister before he left Muktesar for military duty. It embodies an account of the disease and his work regarding the nature of the pathological changes produced. Further research on the disease has had to be postponed for the present.

Contagious abortion in cattle has been reported from some of the military dairies. Efforts are being made to isolate the causal organism of this disease.

Pleuro-pneumonia in goats. During the last month or two of the year under report some experiments were carried out in connection with this disease. Failure to obtain susceptible animals for experimental purposes interrupted the work, but the subject will be taken up again when suitable animals become available.

Surra. Some experiments in connection with the treatment of surra have been carried out but so far without success.

Tuberculosis. Modification of the culture medium used for the preparation of tuberculin has accelerated its production very considerably, and a large stock is now available. The study of strains of the tubercle bacillus isolated from cattle in this country is being continued.

Dourine. The diagnosis of the disease in its early stages presents great difficulties. The complement fixation test has been successfully applied in America, for the detection of infected animals and the study of its applicability to the disease in this country has been taken up by Mr. Shilston. A large number of tests have been carried out with promising results, and it is hoped that the officers of the C.V.D. and the Army Remount Dept. may be assisted in stamping out the disease.

Miscellaneous. The occurrence of a chronic form of enteritis has been reported from one of the military dairies. Examination of specimens from two cases appears to indicate that the condition is that known in Europe under the name Johne's Disease. Two animals suspected of being infected are under observation.

Publications. During the year the following papers were submitted for publication:—

(*a*) "Vitality of the rinderpest virus outside the animal body under natural conditions," by A. W. Shilston, M.R.C.V.S., Assistant Bacteriologist. *Memoirs of the Department of Agriculture in India, Veterinary Series*, Vol. III, No. 1.

(*b*) "Rinderpest—Preparation of Anti-serum," by A. W. Shilston, M.R.C.V.S., Assistant Bacteriologist. *Pusa Agri. Res. Inst. Bull.*, No. 64.

(*c*) "*Kumri*—Combined diffuse Sclerosis and Central Poliomyelitis of Horses," by G. H. K. Macalister, M.A., M.D., D.P.H., Pathologist. *Memoirs of the Department of Agriculture in India, Veterinary Series*, Vol. II, No. 8.

General Remarks. The maintenance of the increased output of sera and vaccines during the last year, difficulties experienced in obtaining material on account of war, and paucity of water supply and labour imposed a heavy strain on the members of the staff.

I am greatly indebted to Mr. Shilston for the assistance that he has rendered me at all times and for the placing of his experience and knowledge of local conditions freely at my disposal.

The prompt and energetic measures taken by Mr. Andrews on the occasions when the water pump broke down prevented a very serious interruption of the work of the laboratory. His services in connection with the whole of the plant under his charge are fully appreciated.

The three European laboratory assistants have carried out their responsible duties with care and thoroughness and their zeal and energy is to be commended.

Mr. Goffi acted as farm manager till July 14th, when he was relieved by Mr. A. J. Hearsey. The improvements effected by Mr. Goffi in the work of the farm

staff and the condition of the estate have been maintained, and every effort is being made to render the estate still more productive.

The services of Rai Sahib Pandit Krishna Nand, Office Superintendent, have been of the utmost value to me in dealing with many administrative and other difficulties that have arisen during the year. His long experience and knowledge of local conditions have been placed freely at my disposal.

The great increase in the office work and changes rendered necessary by the retirement of the accountant, Rai Sahib Pandit Nityi Nand, have entailed a considerable strain on the office staff. The manner in which the work has been carried on deserves special commendation.

PRACTICAL VETERINARY PHARMACOLOGY AND THERAPEUTICS. By HOWARD J. MILKS, D.V.M., Professor of Therapeutics and Small Animal Clinic, New York State Veterinary College at Cornell University, Ithaca, N.Y. Pp. 518, including index. Price 22/- net. (New York: The Macmillan Company. 1917.)

This is a new American work, and, in the United States at least, is likely to gain a considerable circulation. Its subject-matter is well indicated by its title; and only a comparatively short review of it is necessary for English readers.

The first seven chapters, which comprise 71 pages, are ntroductory, and taken up with such matters as definions, the sources and composition of drugs, the gross anatomy and chemistry of plants, pharmacy pharmaceutic methods, dispensing, prescription writing, and general pharmacological considerations. This part of the work is well done; though there are portions, such as the short chapter upon dispensing with its careful directions for and illustrations of the folding of powders and wrapping of boxes and bottles, which hardly appear necessary. The next twenty-one chapters, amount to 410 pages, are devoted to drugs and therapeutic measures, arranged in a somewhat peculiar, but not uncommendable manner. The drugs are first grouped in accordance with their therapeutic action and discussed in a general way, and a more detailed description of the individual drugs follows. This makes up the great bulk of the work, only two other chapters remain. One, a very short one, deals with diagnostic agents; the other, amounts to some fifteen pages, briefly summarises the subjects of bacterins, serums, vaccines, and anti-toxins.

A very large number of drugs are dealt with or mentioned, including many which are little, if at all, used in veterinary practice. This has rendered it impossible for the author to treat the more important veterinary drugs quite so fully as many readers will think desirable; and, though he makes excellent use of the space he has allowed himself, there are not a few important subjects which appear to have received a hardly sufficiently detailed consideration. As is not uncommon in a work covering so large a field, there are portions in which the teaching does not give the most recent knowledge. It is stated, for instance, that veterinary work upon spinal analgesia has been confined to the dog; and, in the very short account given of mallein, the only methods of using it mentioned are the subcutaneous and ophthalmic. Generally speaking, however, the teaching is good, modern, and well conveyed; and the fact to be regretted is that so many subjects are necessarily treated with such comparative brevity. The book contains a great number of prescriptions, many of them very useful; but naturally they are all based upon U.S.P. formulæ.

Undoubtedly the work will be very useful to both students and practitioners in the United States. Its adherence to the U.S.P. formulæ is a distinct drawback to its utility to those in England; but the wide range of its subject-matter, and its resultant frequent suggestiveness of possible new additions to the drugs current in veterinary practice, will render it interesting reading to some practitioners who have a taste for developments in therapeutics. We hope to see its next edition considerably enlarged, which will greatly enhance it value.

W. R. C.

RESEARCH IN ANIMAL DISEASES.

The following extract is from a report in *Scottish Farming News* of the address given by Sir Stewart Stockman at the Highland and Agricultural Society Conference. It may be useful in other directions.

"I understand that what is expected of me is not so much a paper in the form of an essay as an attempt to sketch out in a manner which will open the way for constructive discussion problems in relation to disease of stock which ought to be the subject of research, and also an adequate organisation for tackling these problems, bearing in mind that the primary object is to encourage the development of agriculture by relieving stock-owners and breeders as far as possible of handicaps pressing on their business.

We are all aware of the great importance of abstract research, which aims at acquiring new knowledge for knowledge sake, leaving it to be discovered in the future if that knowledge is of practical application in the multifarious businesses of men's lives. I take it, however, that what we have met to discuss specially, is that kind of research which has for its object the application of science to the investigation and solution of the immediate problems of the day. Given an established but elastic organisation it will also be in a position to deal with the problems of the morrow as they arise. That does not mean that we should wait for the problems to thrust themselves upon us; the organisation should include provision for seeking them out.

The reference to this meeting is worded "Problems for Veterinary Research." Defined problems for research, however, arise mainly after research has been started, and it would involve endless detail were we to attempt anything approaching intimate inition of the problems. The reference does not, I think, intend specific problems, but rather subjects for research. Taking that view the matter is greatly simplified, because although we have a great amount of important knowledge in relation to many diseases there are few about which our information is complete in the sense that the last word can be said as to the method of dealin with them.

For the purpose of dealing with a disease it is not always necessary to have complete information regarding all its important points. For example, rabies, and pleuropneumonia, were dealt with before the specific and causal microbes had been identified, but the latter at a great price. Full information, if handled by trained men who know what they are doing, simplifies the task and renders errors less likely; it also aids the avoidance of irksome restrictions on movement of stock.

At the outset the aim should be to acquire by investigation the fullest knowledge possible of the cause, the manner in which the cause acts—which in relation to contagious diseases includes knowledge of the virulent material—the natural way it enters the system, the way it is set free from the system, the way it is disseminated, diagnosis, prevention and preventive methods (that is especially vaccination methods, which have been too long neglected in this country), and curative methods.

If the question is put, "What diseases of stock cause most loss and most continuous loss to agriculture?" I think the answer would be, tuberculosis, abortion, sterility, swine fever, and internal parasitism due to nematodes. There are also other important diseases

which cause considerable and continuous loss, such as Johne's disease, braxy, louping-ill, scrapie, joint-ill, and fodder poisoning—especially poisoning by fodder, which is otherwise useful. We have also diseases of poultry.

It would be entirely wrong to imply that in regard to many of these diseases or conditions we have not already acquired a great amount of important information, but it cannot be said of any of them that our knowledge is sufficiently complete for the requirements of profitable agriculture, and as regards some of them, there is very little which can be described as fully ascertained knowledge. Considerable as the list mentioned is, I do not think it would be a too ambitious programme to set, say, to a generation of trained workers under an organised scheme of research, but of course, in making a start a selection as to priority has to be adopted.

Practically all these subjects require for their basic work mainly, the services of properly trained veterinary pathologists, using the term in its broadest sense. The services of trained chemists and entomologists would also have to be drawn upon in certain cases, and I propose later to suggest ways of bringing about such co-operation, but the point I wish to impress at the moment is that in relation to studying diseases of stock for the benefit of agriculture, veterinary pathology is the basic and chief thing, and it must not be merely an appendage to something else. It is important enough, and its object is important enough to require this, if material progress is to be made along these lines.

I would like to digress for a moment to say something further in relation to cures and preventives in veterinary practice, because the problem is unusally complicated, and the complications must be faced. If it were sufficient merely to obtain an effective remedy or preventive, it would be simpler. We must, however, divest our minds, I think, of everything bordering on what might be referred to as snobbery in science, and realise at once that we have to deal with questions in which commercial considerations must be given a very important and even a first place. To illustrate my meaning by a simple example, I would point out that a remedy or preventive, be it ever so effective, is not of much practical value in dealing with, let us say, the individual pig or sheep, if if its cost is something like 10s. per dose. Our problem, then, is not merely to cure or prevent disease, but to cure or prevent it on a commercial basis.

Coming to the subject of ways and means, one of the very first points which arises is the question of funds. I do not hold the view that in matters of this kind the public purse should bear the whole cost. It would, I think, be a great misfortune if no effort were made to induce gifts from private individuals for purposes of research. I would further point out that the important problems which remain for solution require laborious and continous research to be carried out for a number of years; the work must be continuous. It seems reasonable to expect that in relation to the question of funds for agricultural research the State will provide adequate contribution, and I suggest that the existing system on a more extended scale has much to recommend it. Funds for agricultural research are put at the disposal of agricultural departments. The money is expended in block grants to a certain number of existing institutions specially adapted to carry on work of a basic character. We arrive thus at institutes for animal pathology, institutes for plant pathology, animal nutrition, etc., all of which carry out a definite and continuous programme of work. The utilisation of the grant is surrounded by the least "red tape" possible; the payment of necessary assistance, the purchase of extraordinary apparatus, the cost of re-agents, the general outlays on experiments, travelling expenses of workers on duty, are all considered to be legitimate expenditure. After meeting the block grants a balance is made available to be at the disposal of a Committee composed of scientists and other authorities on agriculture for the purpose of grants to individual researchers working outside the institute. That is to say, if a competent worker or combination of workers conceive a research likely to be useful to agriculture, and not already provided for, and if the workers are in a position to carry it out, the Committee can at their discretion make grants in aid of that research. Provision also exists for the granting of money in aid of building, or extending institutions when it appears necessary in the national interest. With regard to building, it seems a necessary provision, but a great deal of money useful for other purposes in research can be wasted on unnecessary buildings. It is sometimes forgotten that each of the famous prototypes on which the call is largely founded grew up around a quite exceptional genius, and great pupils whom that genius developed. Building huge and extensive establishments, and then suddenly looking about for men to start them in accordance with their great pretensions has not been a success. The soundest principle seems to me to be the higher development of what we already possess. Moreover, by waiting to find from experience what kind of new institute is required, if any, we have a much better chance of getting the right thing.

For the investigation of diseases of stock, much more than a nucleus already exists in the veterinary colleges, and certain laboratories devoted to and staffed for the purpose. I think the wisest procedure would be in the first place to make full use of these existing institutions and staffs, and to extend their usefulness.

In any scheme which necessarily involves more than one institution, provision has to be made for the co-ordination of results and the prevention of unnecessary duplication. The first can best be met by arranged conferences between the principals, the second by the same thing together with a certain amount of central control.

With regard to provision for the kind of work which for its full accomplishment requires the services of workers in other important branches of science, I do not favour the conception of a central institute to deal with everything. The greater number of its departments run the risk of becoming mediocre and merely an appendage of another which dominates the situation for the time being, unless each section is separate under its own director, which brings us back to separate institutes. If you wish, say, the best chemical help, you naturally go to an institute devoted to chemistry, and unfold your problems for consideration. The point of this is that the best form of co-operation, when required, is a co-operation of separate institutes, each a power of independent growth in relation to its own basic subject.

The institutes and schools at home and abroad will train men, but some inducement must be offered to the best graduates to train as researchers, for it means longer and more arduous study, and a longer period of non-remunerative work than most men are prepared to face. To some extent this can be met by post-graduate scholarships. Provision for such scholarships already exists and should be continued.

The co-operation of stock-owners is highly desirable for several reasons. There is the assistance they can give in bringing their difficulties to the notice of research staffs, the assistance they can give in providing material for the necessary investigation, the assistance they can give in trying methods for cure and prevention, and last but not least, the assistance they can give in the dissemination of information concerning what has been achieved. All stock-owners should co-operate, but I take it their views and requirements would have to be communicated through a committee in close communication with the research institutes; possibly a joint committee of stock-owners and researchers would meet the case.

I would say a further word about the dissemination of recently acquired knowledge which is ripe for utilisa-

tion in practice. Farmers as a rule are badly situated in this respect owing to being more or less isolated, for it is around the centres of learning and research that people have the best chance of catching new ideas as they arrive. A great deal can be done by leaflets and bulletins, and journals devoted to problems in agriculture, but I think this must be supplemented by practical and illustrative lectures—not lectures in general which consist of a few remarks on a dozen of subjects, but lectures on specific subjects of importance. I also venture to suggest that dissemination of knowledge would be greatly facilitated by the formation of local societies for the discussion not so much of agricultural politics as of newly acquired knowledge and subjects about which further information is required."

GLASGOW VETERINARY COLLEGE.

A meeting of the Governors of the Glasgow Veterinary College (Incorporated) was held within the Secretary's Chambers, 105 St. Vincent Street, Glasgow, on 20th inst, Mr. J. Campbell Murray, Vice-Chairman, presided. It was intimated that the following appointments to the Board of Governors had been made since last meeting, namely:—(1) By Glasgow University Court, Professor Robert Muir; (2) by the Royal Faculty of Physicians and Surgeons in Glasgow, Professor John Glaister; (3) by the County Council of Dumbarton, Mr. Allan Burns of Cumbernauld. It was reported that the equipment of the new bacteriological laboratory was being proceeded with as quickly as possible, so that Professor Caigor might commence his investigation into sheep diseases with the least possible delay. The committee appointed to organise an appeal to landowners, flockmasters, and all others interested for assistance financially and otherwise in connection with the investigation had prepared a letter to be issued to all parties interested. The Secretary was communicating with town and country councils throughout Scotland in order to obtain their influence and co-operation in connection with the appeal, and a number of replies promising assistance had already been received. The remit to the committee to organise the appeal was continued.

THE OFFICIAL POET.

"Where are you going, my pretty maid?"
"I'm going a-milking, Sir," she said.
Dear maiden, I'd like to disclose the fact,
That I'm an inspector under the Act.
So pray remain, for I want to know
A thing or two before you go.
Nay, pretty maiden, you must not weep;
How far away are the pigs you keep?
And what percentage of butter fat
Does your moo-cow yield? Pray tell me that.
And how is the health of your pretty pet?
Has it anthrax, cancer, blackleg, garget?
Has your sister measles or whooping-cough?
Is the water clean in the drinking trough?
I pray you answer these questions of fact;
For I'm an inspector under the Act.
With the fierce bacilli also I cope,
By means of my powerful microscope.
Excuse me, I must examine your hand;
Purely official, you'll understand.

From *Farm and Home.*

ARMY VETERINARY SERVICE.

War Office, March 22.

With reference to the awards conferred as announced in the *London Gazette* dated Nov. 19, 1917, the following are the statements of services for which the decorations were conferred:—

THE MILITARY CROSS.

* * * *

T./Capt. J. E. HANNA, A.V.C.—The wagon lines were bombed by enemy aeroplanes and heavy casualties were caused among the animals. As soon as the first bomb fell, he went out and began to attend to the animals. By patience, coolness, and skill he saved many animals who would otherwise have died. He worked unceasingly through the night, setting a magnificent example to all.

Extracts from *London Gazette*,

WAR OFFICE, WHITEHALL, Mar. 23.

REGULAR FORCES. ARMY VETERINARY CORPS.

Cols., having attained the age limit, are placed on ret. pay:—E. Taylor, C.B., C. Rutherford, C.B., C.M.G., (May 24.)

March 26.

Temp. Capt. G. R. James relinquishes his commn. on acct. of ill-health contracted on active service, and is granted the hon. rank of Capt. (Mar. 27).

Temp. Lt. to be temp. Capt.:—J. Brosman (Feb. 15).

To be temp. Capt.:—M. G. O'Gogarty, late Capt. Can. A.V.C. (Mar. 11).

Temp. Lt. to be temp. Capt.:—H. H. Brodie (Mar. 12).

To be temp. Lieuts:—H. F. Vulliamy (Mar. 7); J. H. McManus (Mar. 8); H. M. Roemmele (Mar. 12).

CANADIAN A.V.C.

March 23.

Temp. Capt. M. G. O'Gogarty resigns his commn. on transfer to Imp. Forces (Mar. 10).

Census of Cows.

Mr. Clynes states, in reply to Capt. H. F. Wright, that it is not possible to give exact figures of milk production, but a census of December 2, 1917, shows that in England, Wales, and Scotland there were 1,793,265 cows and heifers in milk, 1,238,678 in calf, and 418,287 other breeding and store cattle of two years and over. At the same date the producers estimated that they would sell (not produce) during the three following months 125,801,646 Imperial gallons of milk. On March 1, 1918, the product of not more than 57,364 cows was being used for the manufacture of condensed milk. The amount of milk converted into dried milk during the six months ended December 31 last was not less than 4,713,118 gallons; during the six months ended January 30, 1917, it was not less than 2,648,961 gallons. No milk is now being used in the manufacture of chocolate.

Early drawn Milk.

A successful defence was raised in a case at Wigton (Cumberland), in which John Nixon, farmer and milk-seller, was charged with selling a pint of new milk which was below standard quality. When analysed by the county analyst, the sample was found to contain only 1·56 per cent. of milk fat; but when an "appeal to the cow" was made three days later 5·10 per cent. of milk fat was disclosed—2·10 per cent. *above* the limit, and one

of the richest samples the authorities had come across in connection with these cases.

The defence was that the first sample, which was supplied to the police, who were waiting at the farm, was taken from the first milk given that morning by two cows, and it was argued that first milk was always poorer, an authority being quoted to the effect that it was quite possible for the first pint of milk drawn from a cow at a milking to contain as little as 1 per cent. of fat, whereas the last pint might show as much as 7 per cent. Evidence was given that the milk was not tampered with, and the Bench dismissed the case.—*The North British Agriculturist.*

Personal.

The election of Mr. H. W. Robson, M.R.C.V.S., to the position of a member of the Town Council in room of Mr. David Nicol, retired, will, we are certain, give general and entire satisfaction. Since his coming to Laurencekirk Mr. Robson has displayed many good qualities. His position of veterinary surgeon has brought him into contact with a wide circle embracing various classes of the community, and it is no exaggeration to say that with all he is popular and esteemed. A man of quiet and steady courtesy, devoted to duty and sterling in all his dealings, he has earned the regard of his fellow townsmen to an extent greater than is superficially apparent. We feel confident that Mr. Robson will carry to the Council Board those admirable qualities which he has shown in his professional capacity, and that, as a result, the Council will be considerably strengthened by his inclusion.—*The Mearns Leader.*

OBITUARY.

ARTHUR NEW, M.R.C.V.S., Ampthill, Beds.
Graduated, Lond: Apl., 1864.

Mr. New died Feb. 16th, 1918, aged 82.

HENRY SNARRY, M.R.C.V.S., Castleford, Yorks, W.R.
N. Edin: Apl., 1876

Died in the year 1916.

FRED. W. THOMPSON, M.R.C.V.S., Reading, Berks.
Glas: May, 1893.

Death occurred 22nd March, at the age of 46.

Deliberate spread of Glanders by Germans.

From the Argentine the Allies get a considerable number of mules. Recently some of them were found to be suffering from glanders; and glanders being almost unknown in the Argentine, very careful investigation was made. The result points to the fact that the disease had been communicated by means of inoculation by German secret service agents in the Argentine. They have deliberately introduced into that neutral country a disease which threatens to destroy the trade between the Argentine and Europe.

DISEASES OF ANIMALS ACTS 1894 TO 1914, SUMMARY OF RETURNS.

Period.	Anthrax		Foot-and-Mouth Disease.		Glanders.†		Parasitic Mange. ‡		Sheep Scab.	Swine Fever.	
	Out-breaks (a)	Animals.	Out-breaks (a)	Animals.	Out-breaks (b)	Animals.	Out-breaks (b)	Animals.	(b)	Out-breaks (a)	Slaughtered. *
GT. BRITAIN. Week ended March 23	12	14			1	1	117	215	5	14	2
Corresponding week in 1917 ...	14	17					59	121	5	44	26
Corresponding week in 1916 ...	12	15			2	9	53	108	7	80	292
Corresponding week in 1915 ...	17	17							7	74	353
Total for 12 weeks, 1918	83	96			9	29	1756	3395	194	180	70
Corresponding period in 1917 ...	167	198			7	12	957	2028	310	507	180
Corresponding period in 1916 ...	154	185	1	24	18	56	953	2359	148	973	3060
Corresponding period in 1915 ...	201	221			7	11			130	879	3682

‡ The Parasitic Mange Order of 1911 was suspended from 6th August, 1914, to 19th March, 1915, inclusive
(a) Confirmed. (b) Reported by Local Authorities. † Counties affected, animals attacked :— London 1.
Board of Agriculture and Fisheries, March 26, 1918. Excluding outbreaks in army horses.

IRELAND. Week ended Mar. 16	...	...	...	...	...	...	Outbreaks 3	8	...	...
Corresponding Week in 1917 ...	...	...	...	...	...	...	2	8	7	33
Corresponding Week in 1916 ...	...	...	...	...	...	...	...	7	5	60
Corresponding Week in 1915 ...	...	...	...	...	...	...	...	11	6	33
Total for 11 weeks, 1918 ...	1	1	...	...	...	...	41	131	4	22
Corresponding period in 1917 ...	2	2	...	...	1	1	11	145	49	310
Corresponding period in 1916 ...	1	5	...	...	...	...	18	161	49	201
Corresponding period in 1915 ...	...	...	...	...	...	..	10	152	53	295

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, March 19, 1918.
NOTE.—The figures for the Current Year are approximate only. * As diseased or Exposed to Infection

SUBSCRIPTIONS TO R.C.V.S.

The Secretary of the Royal College of Veterinary Surgeons begs to acknowledge the receipt of the following subscriptions for 1918 :—

R. Cockburn, Nottingham	£1	1	0
R. B. Cockburn, Capt. A.V.C.	1	1	0
C. W. Elam, Liverpool	1	1	0
R. C. Matthews, Capt. A.V.C. (1917, '18)	2	2	0
J. J. O'Connor, R.V.C. Ireland ('17, '18)	2	2	0
J. D. Rankin, Colne	1	1	0
E. C. Russell, Major A.V.C. (1916–18)	3	3	0
P. Snaith, Bishop Auckland	1	1	0
O. T. Williams, Llangefni	1	1	0
Previously acknowledged	636	2	0
	£649	15	0

Waste of Town Horses.

Mr. Leslie Scott recently introduced to the Home Secretary a deputation of members of Parliament which drew Sir George Cave's attention to the deplorable state of so large a proportion of the horses at work in the streets of London and other great towns at present, and suggested the following remedies :—

1. That definite orders should be given to the police to stop all horses unfit, from whatever cause—whether size or condition—for their work, or overloaded, or over-driven, and to have particular regard to boy-drivers and the matter of pace.

2. That the Home Secretary should acquaint the Royal College of Veterinary Surgeons with these orders, and ask them to give their help with horse owners.

3. That steps should be taken to ensure a better quality of hay being supplied for urban purposes, and its delivery in better condition.

4. That the inspection of the Food Ministry, whose duty it was to see that horses did not get more than the rations allowed under the Orders of the Ministry, should be directed also, as far as possible, to see that horses did not get less.

The Home Secretary expressed strong sympathy with the views of the deputation, and promised to take all possible police action. The Commission of Police, Sir Edward Henry, told the deputation that in the Metropolitan area in the last eight months the police had prosecuted in 1,700 cases of cruelty to horses. Finally, the Controller of Horse Transport at the Board of Trade, Mr. R. H. Selbie, explained that he hoped to arrange with the military authorities, who had control of all hay, to make satisfactory supplies available for the towns.—*The Times.*

"Business" methods in Government Offices.

"T. S. C." writes that he recently went to the Food Controller's Office, 9 Bridge Street, Westminster, to ask about rations for mares in foal, and was told to go to 7 Whitehall Place. When he got there he was told to go 72 Victoria Street, and from there he was referred back again to the original office (9 Bridge Street), where, after waiting half-an-hour, with telephones in full play, he was taken to an office which had to do only with rations for cattle. There he was referred to 7 Whitehall Gardens. He had then already spent 2½ hours in these Government offices.—*The Times.*

Veterinary Societies—Addresses.

BORDER COUNTIES V.M.S.
Pres: Mr. H. Barrow, M.R.C.V.S., Ireby, Carlisle
Hon. Sec: Mr. R. Craig Robinson, M.R.C.V.S., Carlisle
Meetings, Second Friday of Feb., June, and October

GLASGOW V.M.S.
Hon. Sec. Mr. John S. Keane, 11 Falkland Mansions, Kelvinside

ROYAL VETERINARY COLLEGE V.M.A.
Pres. Capt. J. T. Edwards, B.SC., M.R.C.V.S.
Treas: E. S. Shave, Esq., F.R.C.V.S., M.R.C.S.
Sec: Mr. B. Gorton, M.R.C.V.S. *Asst. Sec.* C. W. Heane.

ASSOCIATION OF VETERINARY OFFICERS OF HEALTH
Pres: Mr. T. Douglas, M.R.C.V.S., Kilmarnock
Hon, Sec. & Treas. Mr. A. M. Trotter, M.R.C.V.S., Moore Street, Abattoir, Glasgow

NATIONAL ASSOCIATION OF VETERINARY INSPECTORS
Pres: Mr. J. Abson, F.R.C.V.S., Sheffield
Hon. Sec: Mr. Trevor Spencer, M.R.C.V.S., Kettering

MUNSTER VETERINARY INSPECTORS' ASSOCIATION
Pres: Mr. D. M. Barry, M.R.C.V.S., Mallow
Hon. Sec: Mr. J. F. Mahony, M.R.C.V.S., Caroline St., Cork

NATIONAL VETERINARY BENEVOLENT & MUTUAL DEFENCE SOCIETY.
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